LLOYD'S

REALISTIC DISASTER SCENARIOS

SCENARIO SPECIFICATION – JANUARY 2010 VERSION 1.1

CONTACT DETAILS

DIRECTOR OF UNDERWRITING PERFORMANCE

Tom Bolt
020 7327 6700
tom.bolt@lloyds.com

EXPOSURE MANAGEMENT & REINSURANCE

Paul Nunn
020 7327 6402
paul.nunn@lloyds.com

David Singh
020 7327 6496
david.singh@lloyds.com

Shivani Jaswal
020 7327 5948
shivani.jaswal@lloyds.com

IT SUPPORT

ITG Data Management Helpdesk
020 7327 5252
itgdatamanagement@lloyds.com

CONTENTS

EXECUTIVE SUMMARY 4

COMPULSORY SCENARIOS:

1 TWO EVENTS 6

2 FLORIDA WINDSTORM 12

3 GULF OF MEXICO WINDSTORM 17

4 EUROPEAN WINDSTORM 22

5 JAPANESE WINDSTORM 24

6 CALIFORNIA EARTHQUAKE 27

7 NEW MADRID EARTHQUAKE 32

8 JAPANESE EARTHQUAKE 38

9 UK FLOOD 42

10 TERRORISM 44

SCENARIOS SUBJECT TO DE-MINIMIS REPORTING

11 MARINE 48

12 LOSS OF MAJOR COMPLEX 50

13 AVIATION COLLISION 50

14 SATELLITE RISKS 51

15 LIABILITY RISKS 53

16 POLITICAL RISKS 55

17 ALTERNATIVE RDS A & B 55

EXECUTIVE SUMMARY

In consultation with the LMA appointed RDS Steering Group the 2010 RDS framework remains largely unchanged in terms of the scenarios and events to be reported. A number of the existing scenarios have undergone minor modification, including the requirement to provide supplementary information for some scenarios.

US EARTHQUAKE SCENARIOS

During 2009 there have been a number of cat model changes relating to the US earthquake hazard assessment. Lloyd's have selected comparable event IDs for the Los Angeles, San Francisco and two New Madrid (RDS and ESS) earthquake scenarios. A further consequence of the US earthquake event changes has required us to update damage factors for the smaller Californian footprints. These revised damage factors can be found in the 2010 RDS FAQ document available from the CMR system.

GULF OF MEXICO RDS – OFFSHORE INDUSTRY LOSS

The Gulf of Mexico event remains unchanged, however, after consultation with the Joint Rig Committee and Energy underwriters the Offshore industry insured loss has been adjusted downwards from USD5.5bn in 2009 to USD4.0bn in 2010, reflecting increased retentions and reduced limits for wind cover sold in 2009.

TERRORISM

While still representing peak terrorism accumulations, two Manhattan-based scenarios provided only a limited understanding of Lloyd's global terrorism exposure. To supplement the RDS scenarios, a supplementary information request has been developed with the LMA Terrorism Panel, to be completed for syndicates writing business risk coded TO and TU.

The supplementary information is to be submitted in spreadsheet format and attached to form 990 within the respective RDS (as at 1 Jan) and RDL (as at 1 Jul) returns, and a template is available to download from the CMR system.

LIABILITY RDS

Managing Agents should note the changes to rationalise Liability RDS scenarios (item 15 of this document) and reporting requirements in the document entitled *"Realistic Disaster Scenarios – Guidance & Instructions – January 2010"*, which can be downloaded from the Core Market Returns website.

COUNTRY POLITICAL RISKS SCENARIOS

Over the past year there have been further developments within the geopolitical arena. In light of these changes, we have worked with the LMA Political Risks Panel to update scenarios for the 2010 RDS framework.

For 2010 Managing Agents must supply supplementary country aggregate for a list of top 20 countries, agreed in consultation with the LMA Political Risks subgroup. These are to be listed in spreadsheet format and loaded via form 990 of the RDS return. A template is available from the CMR system.

COMPULSORY SCENARIOS

1 TWO EVENTS

Managing agents should model on an ‘as if’ basis the occurrence of a South Carolina hurricane in the immediate aftermath of a North-East US hurricane.

Managing agents should assume that these events fall in the same reinsurance year and that there has not been sufficient time between events to purchase additional reinsurance protection. The physical characteristics for the North-East and South Carolinas scenarios remain unchanged from the 2009 RDS framework.

Managing agents should return losses to both events separately for each syndicate via the Lloyd’s Core Market Returns system.

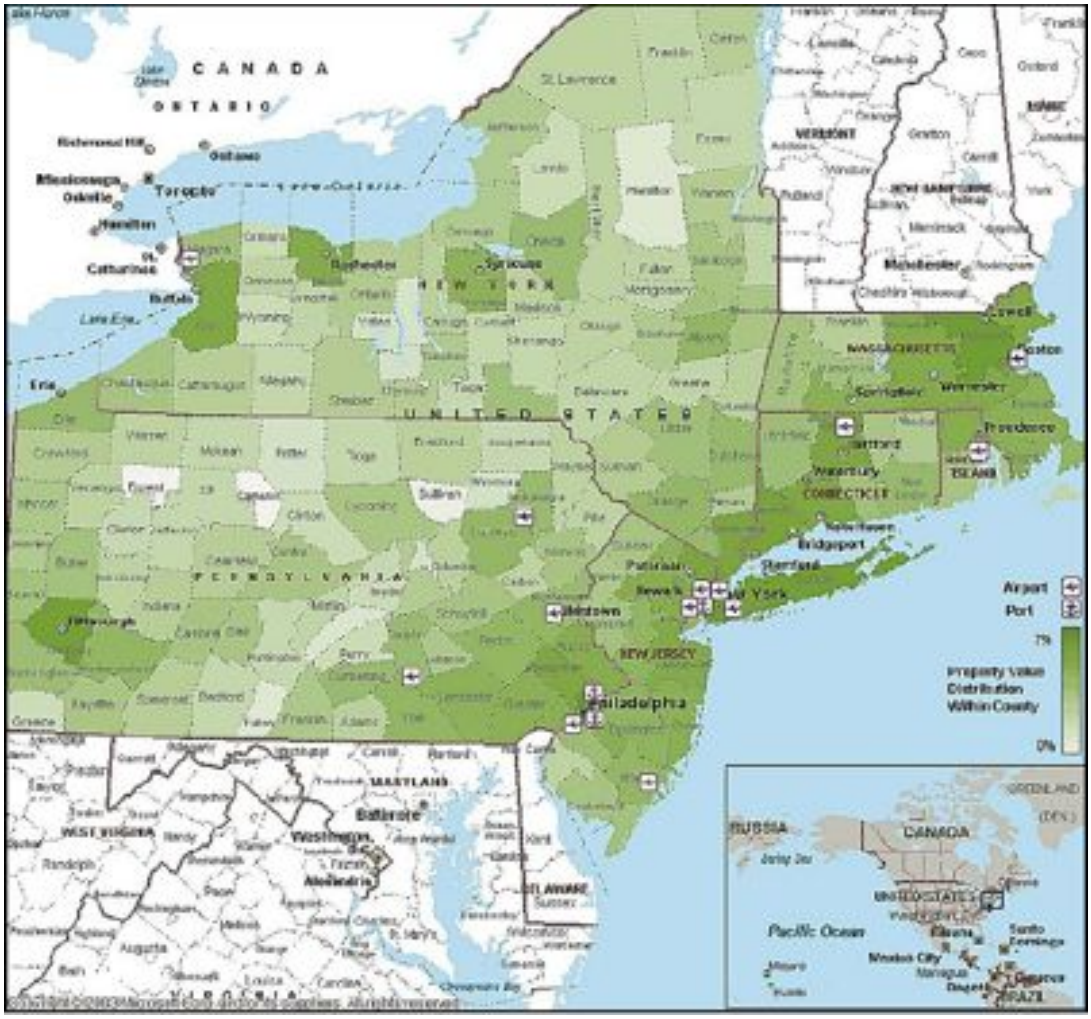
TWO EVENTS – EVENT ONE

NORTH-EAST WINDSTORM EVENT

A USD78bn Industry Property Loss including consideration of demand surge and storm surge from a North-East hurricane making landfall in New York State. The hurricane also generates significant loss in the States of New Jersey, Connecticut, Massachusetts, Rhode Island and Pennsylvania.

DISTRIBUTION OF NORTH-EAST PROPERTY VALUES

The map below illustrates Lloyd’s assumptions for the distribution of property values within the affected states, which are also detailed in the Event Damage Factor Tables found on the Core Market Returns system.



MAJOR PORTS

The table below lists the main ports that would be affected by the windstorm that managing agents should consider in assessing their potential exposures. They should also give regard to exposures in smaller ports that fall within the footprint of the event.

Port	County	State
Camden	Camden	New Jersey
New York/New Jersey		
Philadelphia	Delaware	Pennsylvania

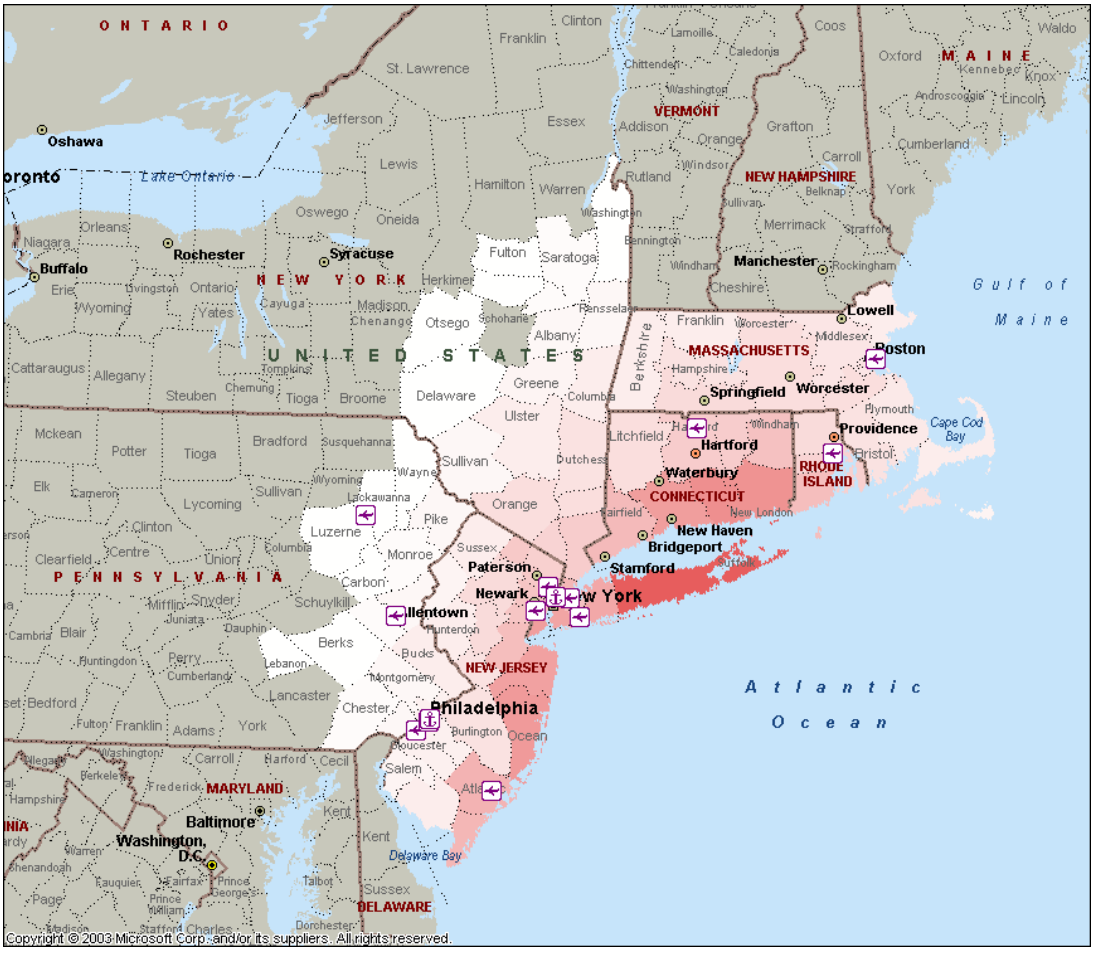
MAJOR AIRPORTS

The table below lists the main international airports in the affected areas, which managing agents should consider in assessing their potential exposures. Managing Agents should also have regard to exposures in smaller airports that fall within the footprint of the event.

Airport	County	State
Atlantic City International Airport (ACY)	Atlantic	New Jersey
Bradley International Airport (BDL)	Hartford	Connecticut
Edward Lawrence Logan International Airport (BOS)	Suffolk	Massachusetts
John F. Kennedy International Airport (JFK)	Queens	New York
La Guardia Airport (LGA)	Queens	New York
Lehigh Valley International Airport (ABE)	Lehigh	Connecticut
Newark International Airport (EWR)	Essex	New Jersey
Philadelphia International Airport (PHL)	Delaware	Pennsylvania
Providence - T.F. Green Airport (PVD)	Kent	Rhode Island
Tetarboro Airport (TEB)	Bergen	New Jersey
Wilkes-Barre/Scranton International Airport (AVP)	Luzerne	Pennsylvania

EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for the North-East Windstorm Event, which are also detailed in the Event Damage Factor Tables available from the Core Market Returns system.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD47.50bn
Commercial Property	USD30.50bn
Auto	USD1.75bn
Marine	USD0.75bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Personal Accident** **Aviation**

Liability **Cancellation**

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

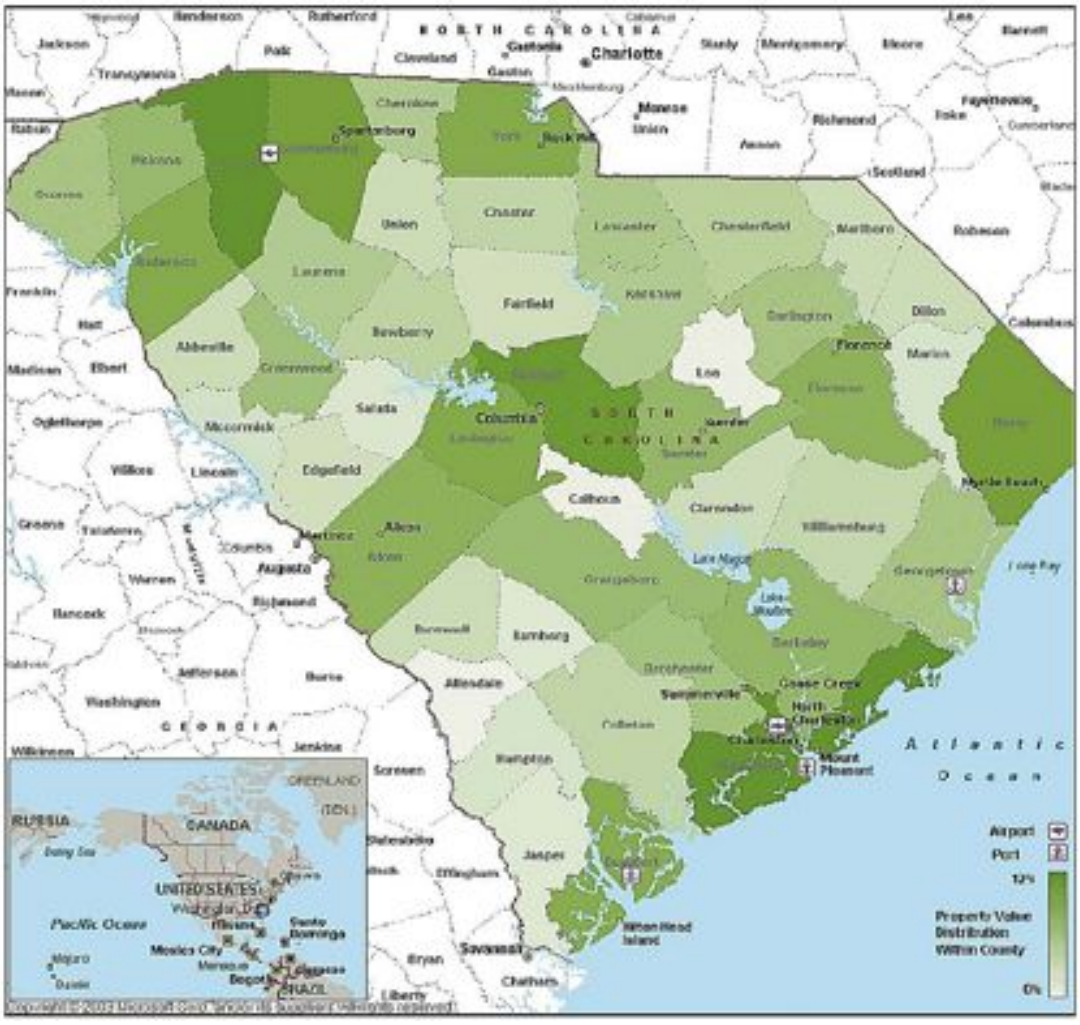
TWO EVENTS – EVENT TWO

CAROLINAS WINDSTORM EVENT

A USD36bn Industry Property Loss from a hurricane making landfall in South Carolina, including consideration of demand surge and storm surge.

DISTRIBUTION OF SOUTH CAROLINA PROPERTY VALUES

The map below illustrates Lloyd's assumptions for the distribution of property values within South Carolina, which are also detailed in the Event Damage Factor Tables found on the Core Market Returns system.



MAJOR PORTS

The table below lists the main ports in South Carolina that would be affected by the windstorm that managing agents should consider in assessing their potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the event.

Port	County
Charleston	Charleston
Georgetown	Georgetown
Port Royal	Beaufort

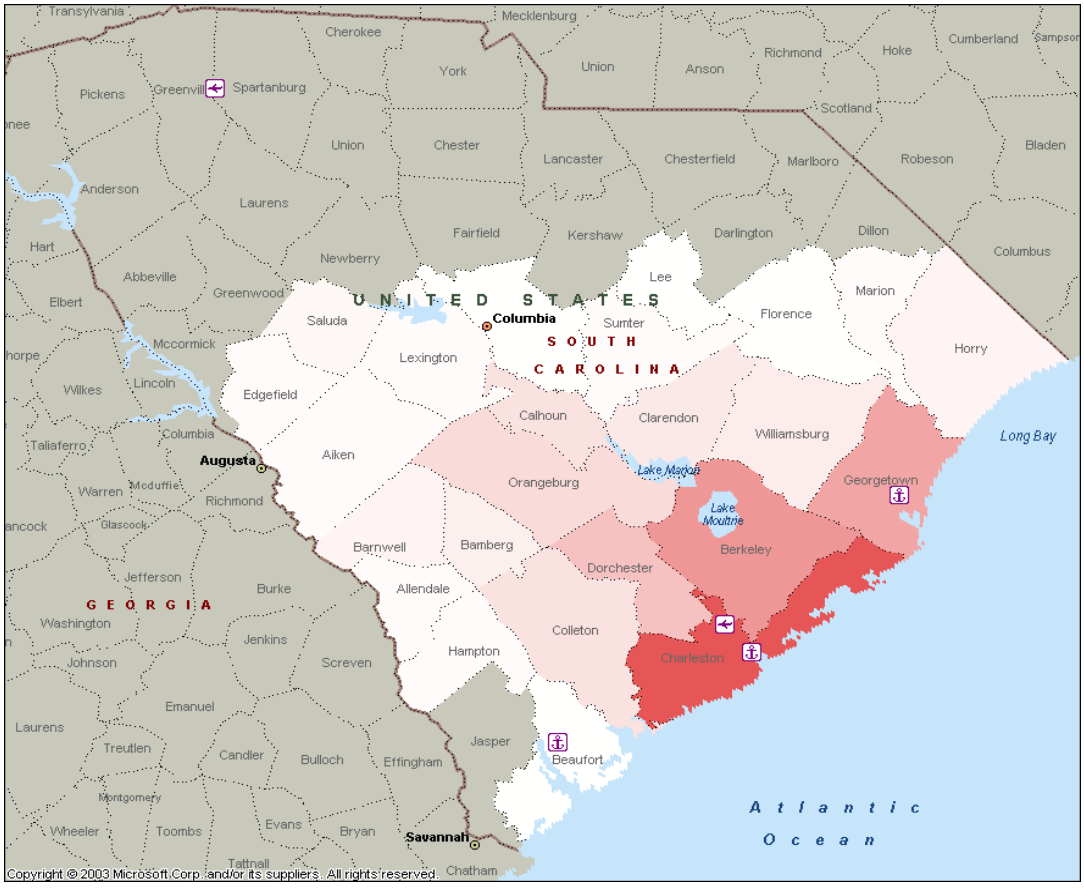
MAJOR AIRPORTS

The table below lists the main international airports in the affected areas, which managing agents should consider in assessing their potential exposures. They should also have regard to exposures in smaller airports that fall within the footprint of the event.

Airport	County
Charleston International Airport (CHS)	Charleston
Greenville - Spartanburg International Airport (GSP)	Greenville

EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for the South Carolina Windstorm Event, which are also detailed in the Event Damage Factor Tables.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD24.00bn
Commercial Property	USD12.00bn
Auto	USD0.53bn
Marine	USD0.27bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Personal Accident** **Aviation**

Liability **Cancellation**

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

2 FLORIDA WINDSTORM

DISTRIBUTION OF FLORIDA PROPERTY VALUES

The map below illustrates Lloyd's assumptions for the distribution of property values within Florida. The event's physical characteristics and industry loss levels for 2010 are to remain unchanged at USD125bn (primarily a consequence of recessionary forces and flat demographic forces).

MAJOR PORTS

The table below lists the main ports in Florida, which managing agents should consider in assessing their potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the events.

Port	County
Jacksonville	Duval
Miami	Miami-Dade
Palm Beach	Palm Beach
Port Canaveral	Brevard
Port Everglades	Broward
Port Manatee	Manatee
Tampa	Hillsborough

MAJOR AIRPORTS

The table below lists the main international airports in Florida, which managing agents should consider in assessing their potential exposures.

They should also have regard to exposures in smaller airports that fall within the footprint of the events.

Airport	County
Fort Lauderdale/Hollywood	Broward
Miami	Miami-Dade
Orlando	Orange
Tampa	Hillsborough

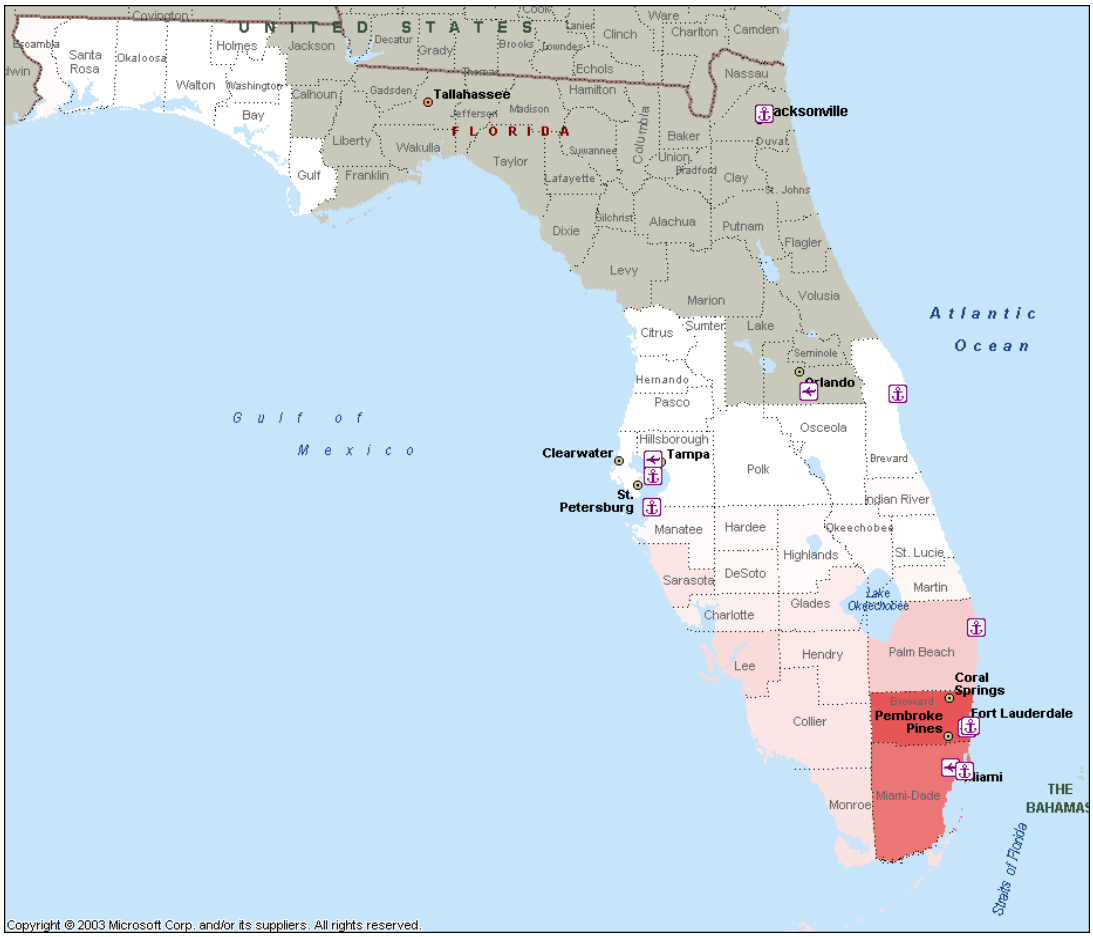
FLORIDA WINDSTORM – EVENT ONE

MIAMI-DADE WINDSTORM EVENT

A USD125bn Industry Property Loss, including consideration of demand surge and storm surge, from a Florida Windstorm landing in Miami-Dade County.

EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for the Miami-Dade Windstorm Event, which are also detailed in the Event Damage Factor Tables found on the Core Market Returns system.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD63.00bn
Commercial Property	USD62.00bn
Auto	USD2.25bn
Marine	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Personal Accident** **Aviation**

Liability **Cancellation**

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

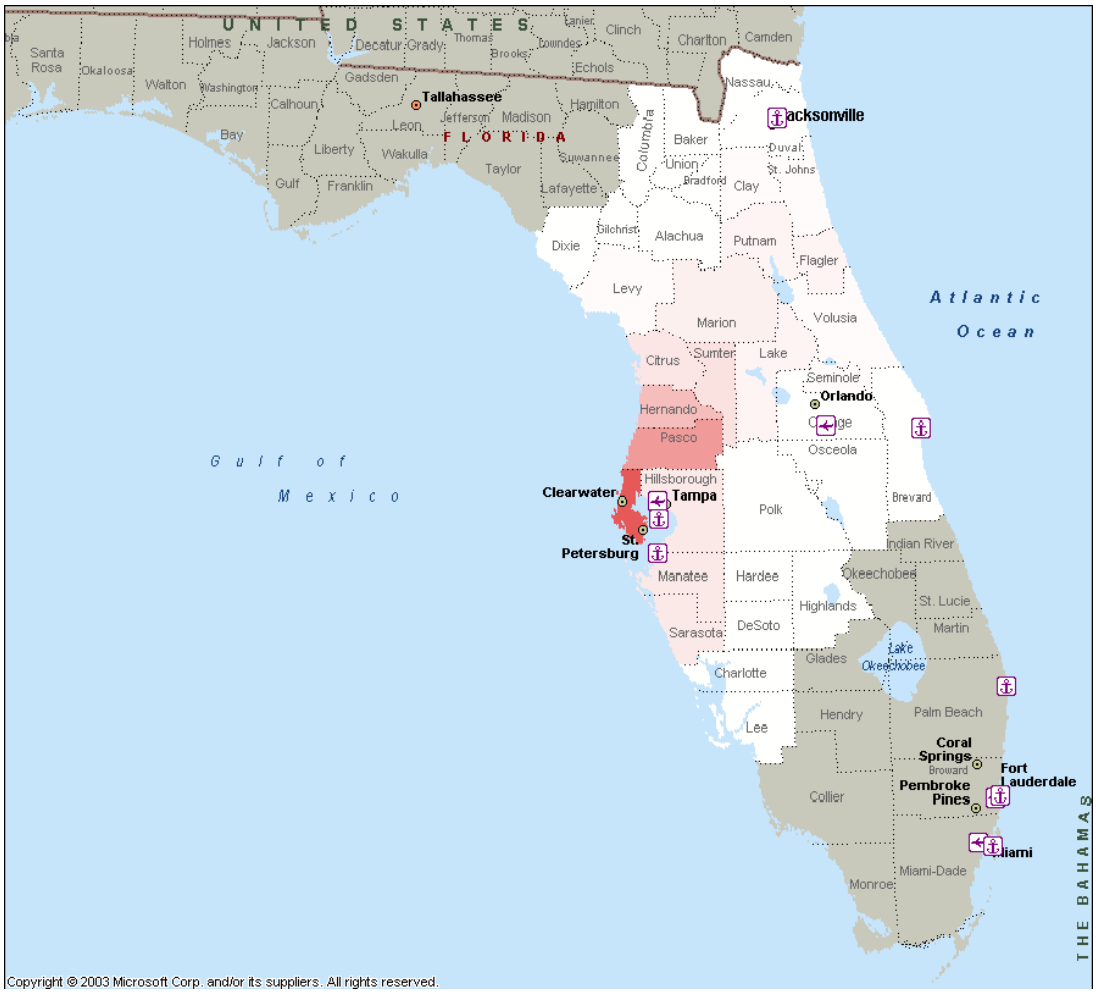
FLORIDA WINDSTORM – EVENT TWO

PINELLAS WINDSTORM EVENT

A USD125bn Industry Property Loss, including consideration of demand surge and storm surge, from a Florida Windstorm landing in Pinellas County.

EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for the Pinellas Windstorm Event, which are also detailed in the Event Damage Factor Tables found on the Core Market Returns system.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD88.00bn
Commercial Property	USD37.00bn
Auto	USD2.00bn
Marine	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art	**Personal Accident**	**Aviation**
Liability	**Cancellation**	

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

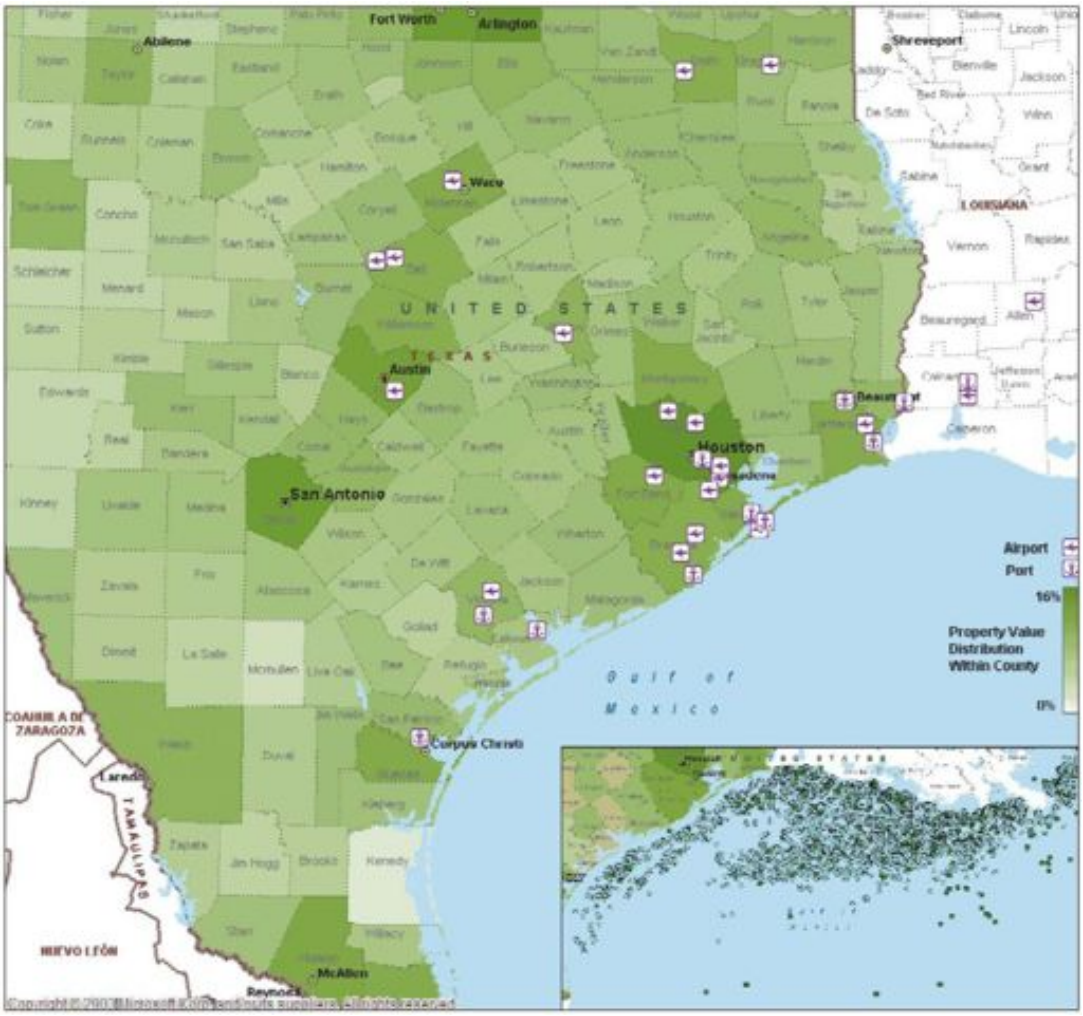
3 GULF OF MEXICO WINDSTORM

GULF OF MEXICO WINDSTORM EVENT

A USD111bn Industry Loss arising from a Gulf of Mexico hurricane resulting in offshore energy *insured* loss of USD4.0bn (USD11bn *insurable* loss) and mainland insured property losses of USD107bn including the consideration of demand surge and storm surge.

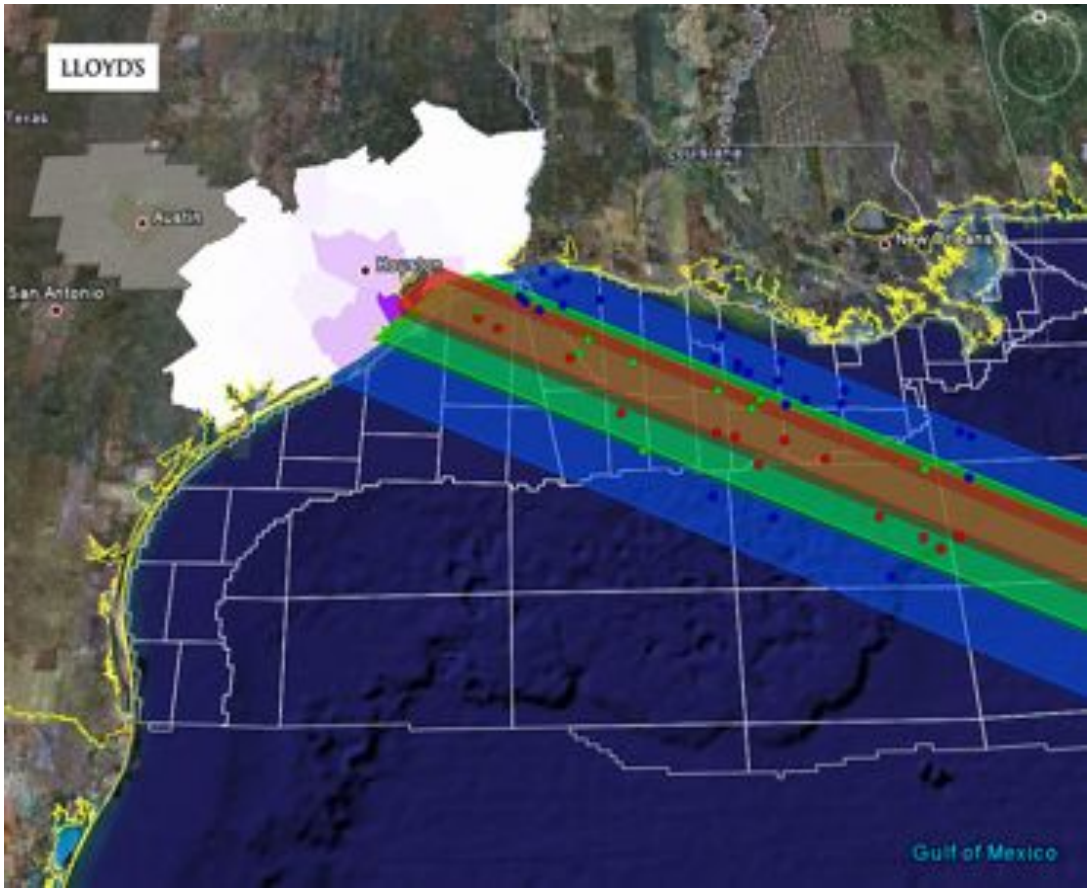
DISTRIBUTION OF PROPERTY VALUES IN THE AFFECTED MAINLAND AREAS AND OF PLATFORMS IN THE GULF OF MEXICO

The map below illustrates Lloyd's assumptions for the distribution of property values within the affected mainland areas, which are also detailed in the Event Damage Factor Tables available on the Core Market Returns system. Inset an indicative distribution of offshore energy platforms in the Gulf of Mexico is shown.



OFFSHORE EVENT DAMAGE TRACK

The map below illustrates the damage track of the windstorm in the Gulf of Mexico prior to making landfall.



- Less than 10 miles from the centre of the damage track
- 10 to 25 miles from the centre of the damage track
- 25 to 50 miles from the centre of the damage track

Position of centre of damage track

Start	Latitude 25° 50’ 30.8401" North	Longitude 86° 00’ 50.0400" West
End	Latitude 30° 52’ 53.7600" North	Longitude 98° 43’ 16.3200" West

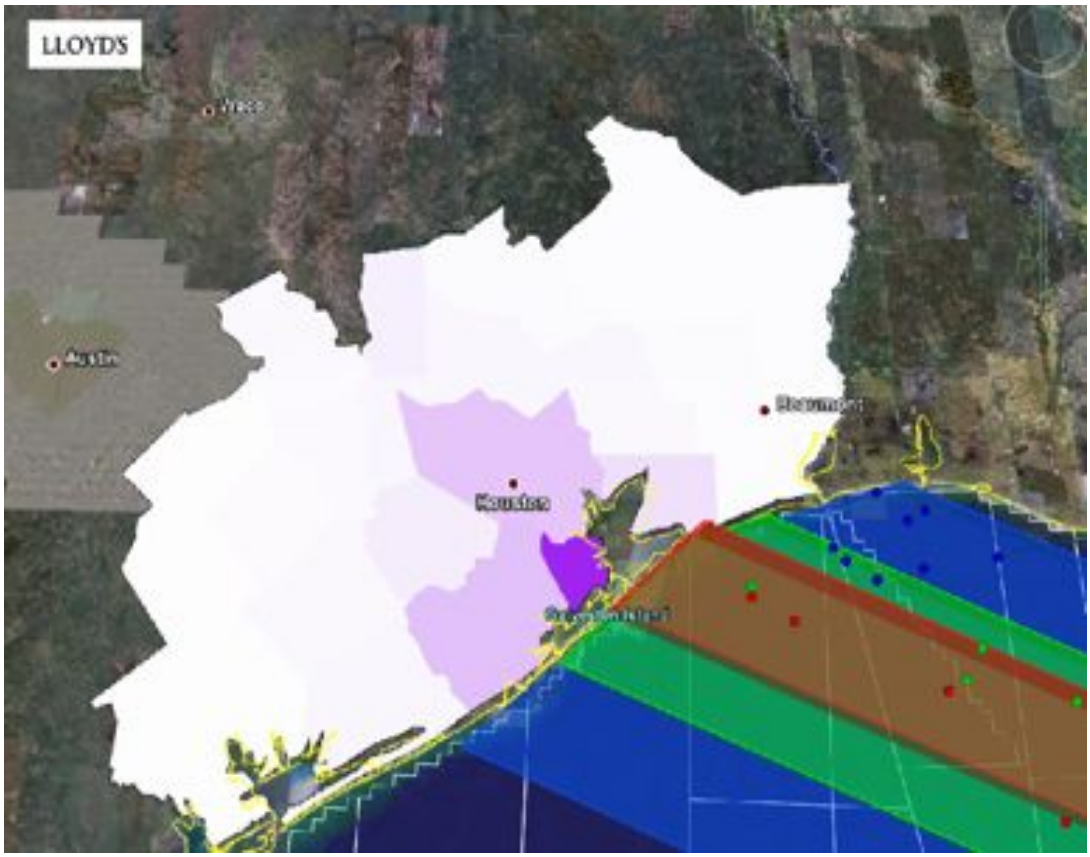
SUPPLEMENTARY INFORMATION

In addition to the requirement to return the components contributing to losses from the offshore scenario, managing agents are required to provide the following information for their managed syndicates:

- Using CMR form 990, managing agents are required to provide total Gulf of Mexico wind exposed aggregate, for fixed and mobile assets, as at 1st January, 2010.
- ‘As-if’ Katrina Gross and Final Net losses. To be reported via CMR form 990, using the RDS PML assumptions – based upon the Hurricane Katrina track.
- ‘As-if’ Ike Gross and Final Net losses. To be reported via CMR form 990, using the RDS track assumptions – based upon the Hurricane Ike track.

ONSHORE EVENT FOOTPRINT

The map below highlights the footprint and damage levels for the onshore component of the affected counties. These damage levels are also detailed in the Event Damage Factor Tables found on the Core Market Returns system.



INDUSTRY LOSS LEVELS

No change to the Onshore loss element of the Gulf of Mexico event, however, the Offshore industry insured loss component to be revised downwards from USD5.5bn in 2009 to USD4.0bn in 2010, as a result of increased retentions and tighter limits for GoM wind cover sold.

Managing agents should assume the following components for the loss.

Residential Property	USD65.00bn
Commercial Property	USD42.00bn
Offshore Energy (Insured)	USD4.00bn
Auto	USD1.00bn
Marine	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Personal Accident** **Aviation**

Liability **Cancellation**

MAJOR PORTS

The table below lists the main ports that would be affected by the windstorm, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the event.

Port	County
Beaumont	Jefferson
Freeport	Brazoria
Galveston	Galveston
Houston	Harris
Matagorda Ship Channel	Calhoun
Orange	Orange
Port Arthur	Jefferson
Texas City	Galveston
Victoria	Victoria

MAJOR AIRPORTS

The table below lists the main airports in Texas that would be affected by the windstorm, which managing agents should consider in assessing their potential exposures. They should also have regard to exposures in smaller airports that fall within the footprint of the event.

Airport	County
Brazoria County	Brazoria
Clover Field	Brazoria
David Wayne Hooks Memorial	Harris
Easterwood Field	Brazos
Ellington Field	Harris
George Bush Intercontinential	Harris
Killeen Municipial	Bell
Robert Gray Army Air Field	Bell
Salaika Aviation	Brazoria
Scholes International	Galveston
Southeast Texas Regional	Jefferson
Sugar Land Municipial	Fort Bend
Victoria Regional	Victoria
Waco Regional	Mclennan
William P. Hobby	Harris

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses (except offshore energy CBI) from this event.

4 EUROPEAN WINDSTORM

EUROPEAN WINDSTORM CENTRAL TRACK

This event is based upon a low pressure track originating in the North Atlantic basin resulting in an intense windstorm with maximum/peak gust wind speeds in excess of 50 metres per second (112 mph or 97 knots). The strongest winds occur to the south of the storm track, resulting in a broad swath of damage across southern England, France, Belgium, Netherlands, Luxembourg, Germany and Denmark.

This event results in an estimated Industry Property Loss of USD31bn. The map below illustrates the windstorm track and affected regions.

INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD21.00bn
Commercial Property	USD8.00bn
Agricultural	USD2.00bn
Auto	USD1.00bn
Marine	USD0.50bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Personal Accident** **General Aviation**

Liability

PROPERTY VALUE DISTRIBUTIONS AND DAMAGE FACTORS

Tables outlining Lloyd's assumptions for the distribution of property values and the damage factors for this event are listed in the Event Damage Factor Tables available from the Core Market Returns system.

5 JAPANESE WINDSTORM

JAPANESE WINDSTORM EVENT

This event is based on the Isewan ('Vera') typhoon event of 1959. As a guide, the estimated Industry Property Loss from this event would be USD15bn.

PROPERTY VALUE DISTRIBUTION MAP

The map below illustrates Lloyd's assumptions for the distribution of property values at prefecture level, which are also detailed in the Event Damage Factor Tables available from the Core Market Returns system.

MAJOR PORTS

The table below lists the main Japanese ports in the Typhoon Isewan (Vera) footprint, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the event.

Port
Chiba Port
Nagoya Port
Yokamaha Port
Kawasaki Port
Mitzushima Port

Kitakyushu Port
Tokyo Port
Osaka Port
Tomakomai Port
Kobe Port

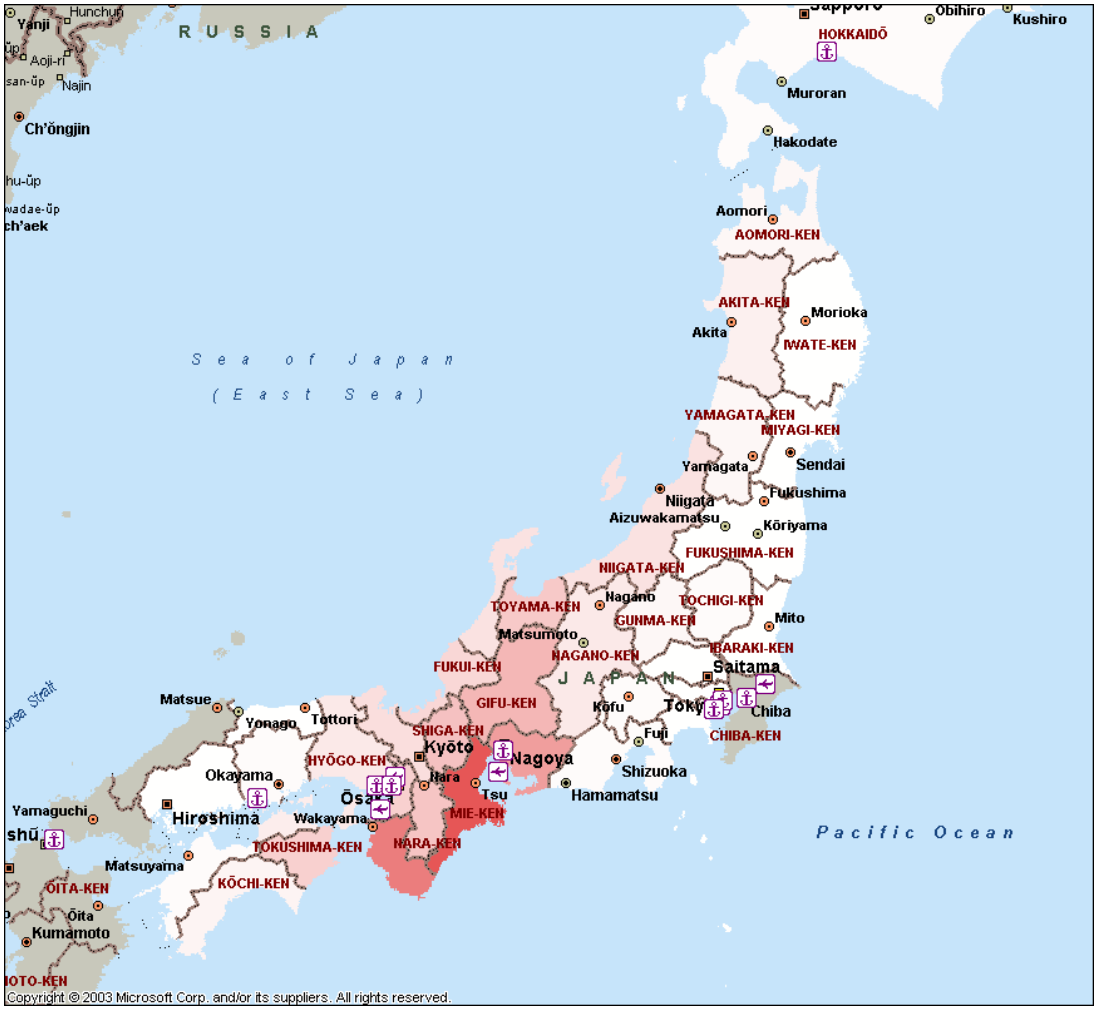
MAJOR AIRPORTS

The table below lists the main international and domestic airports potentially impacted by the Typhoon, which managing agents should consider in assessing syndicate potential exposures.

Airport
Narita International Airport
Central Japan International Airport
Kansai International Airport
Tokyo International Airport
Osaka International Airport

TYPHOON ISEWAN EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for Japan, which are also detailed in the Event Damage Factor Tables.



Managing agents should assume the following components of the loss.

Residential Property	USD6.50bn
Commercial Property	USD8.50bn
Marine	USD0.50bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art	**Personal Accident**	**Aviation**
Liability	**Marine**	

6 CALIFORNIA EARTHQUAKE

The map below illustrates Lloyd's assumptions for the distribution of property values within California, which are also detailed in the Event Damage Factor Tables.

MAJOR PORTS

The table below lists the main ports in California, which managing agents should consider in assessing their potential exposures. They should also give regard to exposures in smaller ports that fall within the footprint of the events.

Port	County
Long Beach	Orange
Los Angeles	Los Angeles
Oakland	Alameda
Port Hueneme	Ventura
Richmond	Contra Costa
San Diego	San Diego
San Francisco	San Francisco
Stockton	San Joaquin

MAJOR AIRPORTS

The table below lists the main international airports in California, which managing agents should consider in assessing their potential exposures. They should also have regards to exposures in smaller airports that fall within the footprint of the events.

Airport	County
Los Angeles (LAX)	Los Angeles
San Diego-Linderbergh (SAN)	San Diego
San Francisco (SFO)	San Francisco
San Jose (SJC)	San Jose

CALIFORNIA EARTHQUAKE – EVENT ONE

LOS ANGELES EARTHQUAKE EVENT

A USD78bn Industry Property (shake and fire following) Loss, gross of take-up rates and including consideration of demand surge from an earthquake originating from the Raymond Fault in Los Angeles.

EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for the Los Angeles Earthquake Event which are also detailed in the Event Damage Factor Tables.

INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD36.00bn
Commercial Property	USD42.00bn
Workers Compensation	USD5.50bn
Marine	USD2.25bn
Personal Accident	USD1.00bn
Auto	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Liability** **Cancellation**

PA AND WCA LOSSES

It should be assumed that there will be 2,000 deaths and 20,000 injuries as a result of the earthquake. Managing agents should assume that 50% of those injured will have PA cover.

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

ESTIMATION OF AVIATION HULL LOSSES

Lloyd's has commissioned research that indicates that minimal Aviation Hull losses would be expected to arise from an earthquake. Managing agents should take account of these findings in calculating syndicate loss estimates.

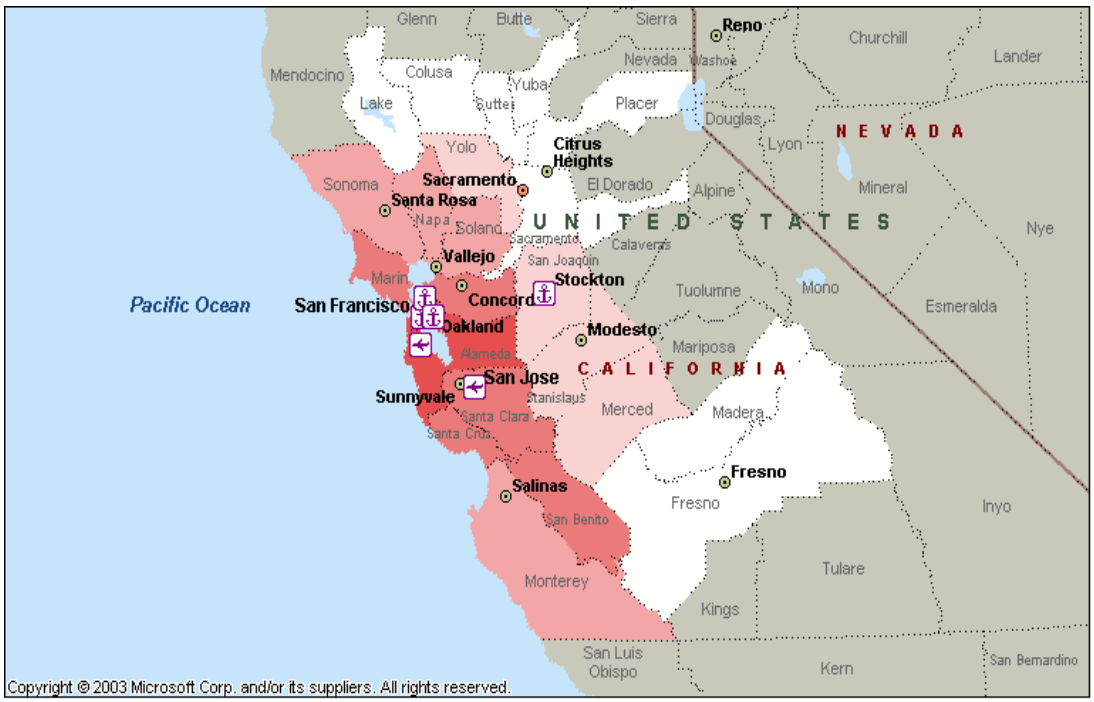
CALIFORNIA EARTHQUAKE – EVENT TWO

SAN FRANCISCO EARTHQUAKE EVENT

A USD78bn Industry Property (shake and fire following) Loss, gross of take-up rates and including consideration of demand surge, from an earthquake originating from the Hayward Rogers in San Francisco.

EVENT FOOTPRINT

The map overleaf illustrates the footprint and damage levels for the San Francisco Earthquake Event, which are also detailed in the Event Damage Factor Tables.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD39.00bn
Commercial Property	USD39.00bn
Workers Compensation	USD5.50bn
Marine	USD2.25bn
Personal Accident	USD1.00bn
Auto	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Liability** **Cancellation**

PA AND WCA LOSSES

It should be assumed that there will be 2,000 deaths and 20,000 injuries as a result of the earthquake. Managing agents should assume that 50% of those injured will have PA cover.

EXCLUSION OF CONTINGENT BUSINESS INTERRUPTION LOSSES

Lloyd's recognises the difficulties involved in modelling losses from Contingent Business Interruption (CBI) covers. Managing agents should therefore exclude CBI losses from this event.

ESTIMATION OF AVIATION HULL LOSSES

Lloyd's has commissioned research that indicates that minimal Aviation Hull losses would be expected to arise from an earthquake. Managing agents should take account of these findings in calculating syndicate loss estimates.

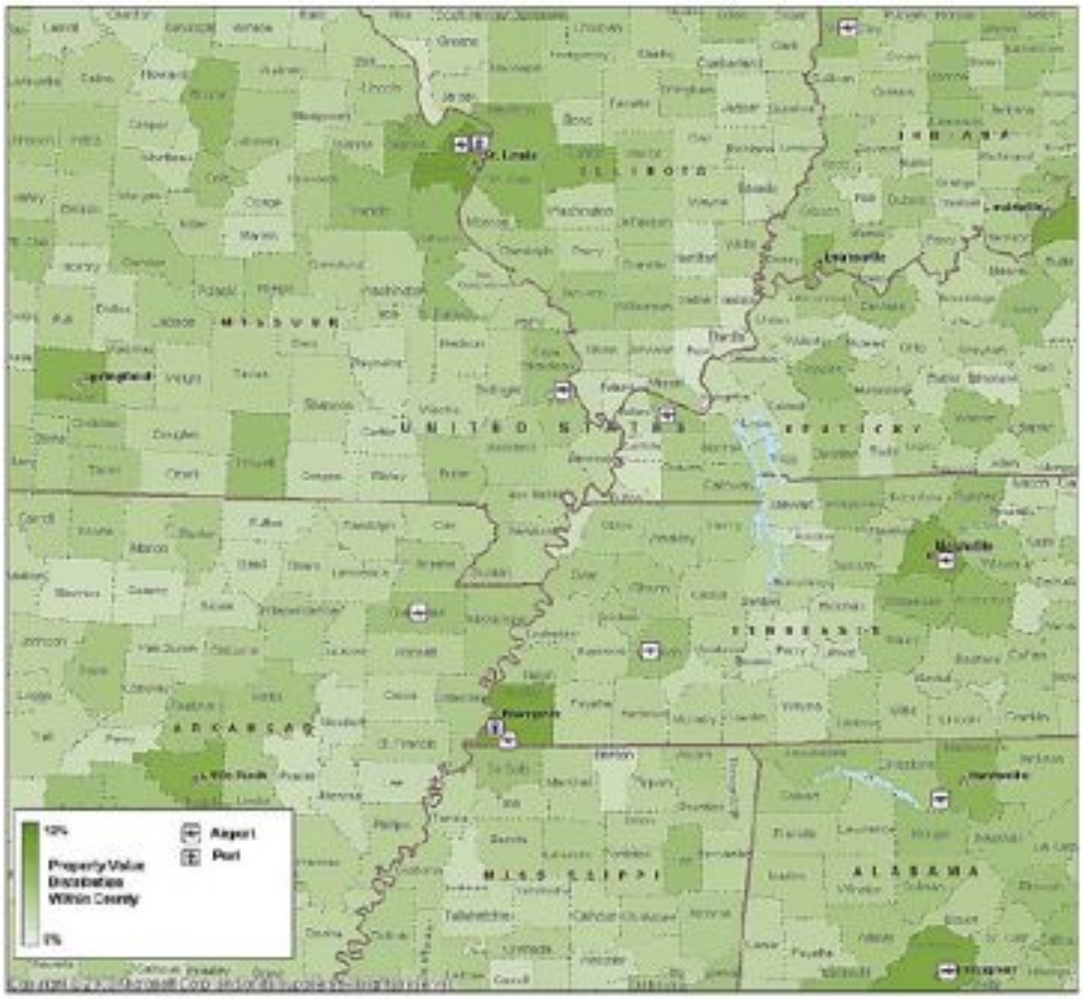
7 NEW MADRID EARTHQUAKE

SPECIFICATION OF TWO LOSS EVENTS

Due to the uncertainty surrounding the frequency and potential cost of a New Madrid earthquake, Lloyd's requires managing agents to provide loss estimates against two hypothetical events: a realistic disaster scenario and a further 'Extreme Stress Scenario' ('ESS') in order to determine the market's exposure to a more extreme occurrence. The ESS is not subject to the Franchise Guidelines for the RDS.

DISTRIBUTION OF PROPERTY VALUES IN THE NEW MADRID SEISMIC ZONE

The map below illustrates Lloyd's assumptions for the distribution of property values within the New Madrid Seismic Zone ('NMSZ') which are also detailed in the Event Damage Factor Tables.



MAJOR PORTS

The table below lists the main ports in the NMSZ, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the events.

Port	County	State
Pascagoula	Jackson	Mississippi
Gulfport	Harrison	Mississippi
South Louisiana	St John the Baptist	Mississippi
Baton Rouge	West Baton Rouge	Louisiana
Mobile	Mobile	Alabama
Memphis	Shelby	Tennessee
St. Louis	St Louis	Missouri

MAJOR AIRPORTS

The table below lists the main domestic and international airports in the NMSZ, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the events.

Airport	County	State
Jonesboro Municipal	Craighead	Arkansas
Cape Girardeau Regional	Scott	Missouri
Barkley Regional	McCracken	Kentucky
McKellar-Sipes Regional	Madison	Tennessee
Memphis International	Shelby	Tennessee
Louis Armstrong New Orleans	Jefferson Parish	Louisiana
Alexandria International	Rapides Parish	Louisiana
Jackson International	Rankin	Mississippi
Birmingham International	Jefferson	Alabama
Huntsville International	Madison	Alabama
Nashville International	Davidson	Tennessee
Lambert-St Louis International	Saint Louis	Missouri
Terre Haute International	Vigo	Indiana

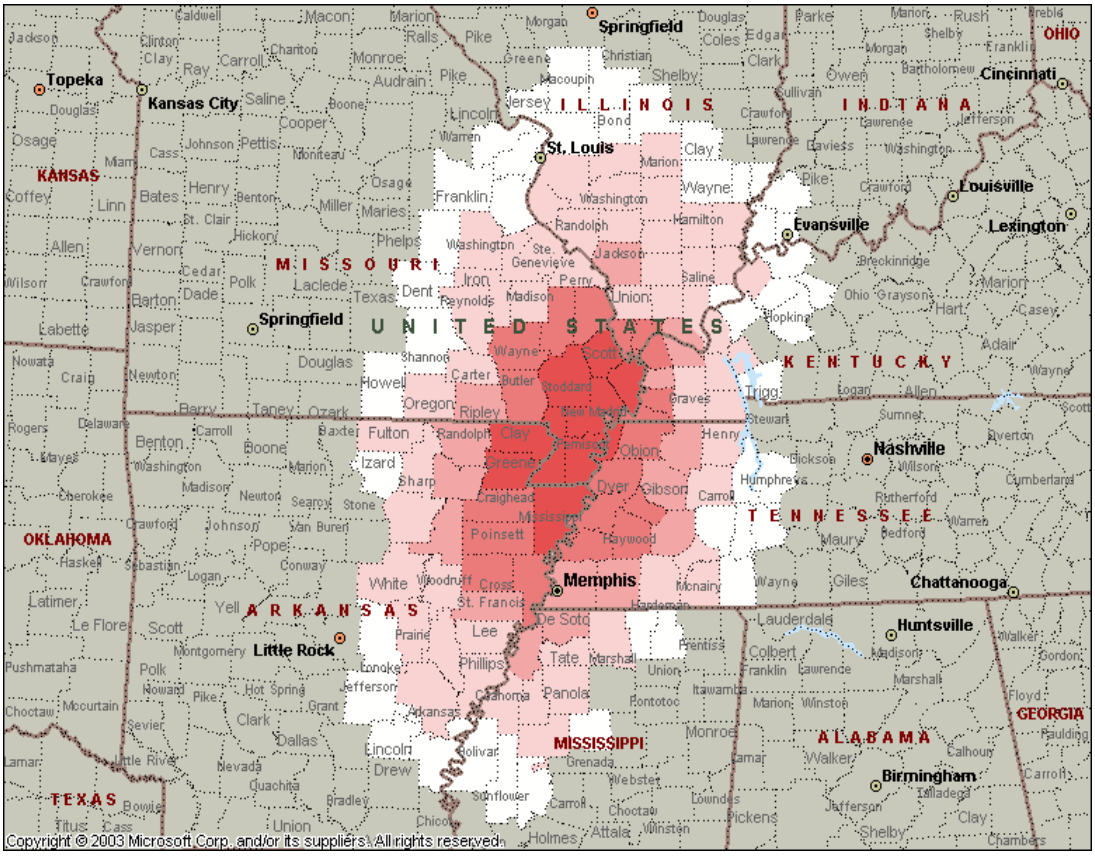
NEW MADRID EARTHQUAKE – RDS EVENT

NEW MADRID EARTHQUAKE RDS EVENT

A USD47bn Industry Property (shake and fire following) Loss, gross of take up rates including consideration of demand surge.

EVENT FOOTPRINT

The map below illustrates the footprint and county/parish damage levels for this event, which are also detailed in the Event Damage Factor Tables.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD32.50bn
Commercial Property	USD14.50bn
Workers Compensation	USD2.50bn
Marine	USD1.50bn
Personal Accident	USD0.50bn
Auto	USD0.50bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Liability** **Cancellation**

PA AND WCA

It should be assumed that there will be 1,000 deaths and 10,000 injuries as a result of this earthquake. Managing agents should assume that 50% of those injured will have PA cover.

AVIATION

Lloyd's has commissioned research that indicates that minimal Aviation Hull losses would be expected to arise from an earthquake. Managing agents should take account of these findings in calculating syndicate loss estimates.

BUSINESS INTERRUPTION

Overland transport systems are severely damaged and businesses impacted, leading to significant business interruption exposure for a period of 30 days. This is restricted to the inner zone of maximum earthquake intensities (highlighted on the event footprint).

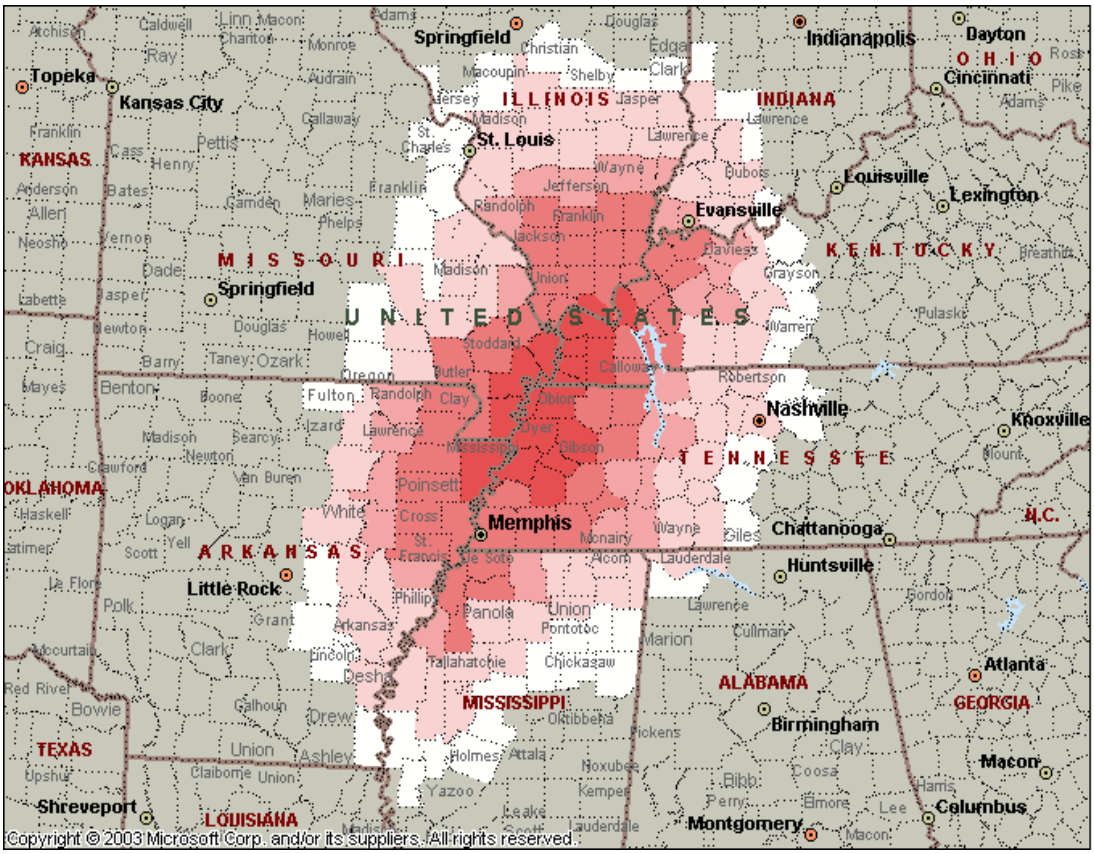
NEW MADRID EARTHQUAKE – EXTREME STRESS SCENARIO (ESS) EVENT

NEW MADRID EARTHQUAKE 'ESS' EVENT

A USD107bn Industry Property (shake and fire following) Loss from an earthquake, gross of take-up rates and including consideration of demand surge originating within the NMSZ near Mississippi county.

EVENT FOOTPRINT

The map below illustrates the footprint and county/parish damage levels for this event, which are also detailed in the Event Damage Factor Tables.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD71.00bn
Commercial Property	USD36.00bn
Workers Compensation	USD5.00bn
Marine	USD3.00bn
Personal Accident	USD1.00bn
Auto	USD1.00bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

Specie/Fine Art **Liability** **Cancellation**

PA AND WCA

It should be assumed that there will be 2,000 deaths and 20,000 injuries as a result of this earthquake. Managing agents should assume that 50% of those injured will have PA cover.

AVIATION

Lloyd's has commissioned research that indicates that minimal Aviation Hull losses would be expected to arise from an earthquake. Managing agents should take account of these findings in calculating syndicate loss estimates.

BUSINESS INTERRUPTION

Overland transport systems are severely damaged and businesses impacted, leading to significant business interruption exposure for a period of 30 days. This is restricted to the inner zone of maximum earthquake intensities (highlighted on the event footprint).

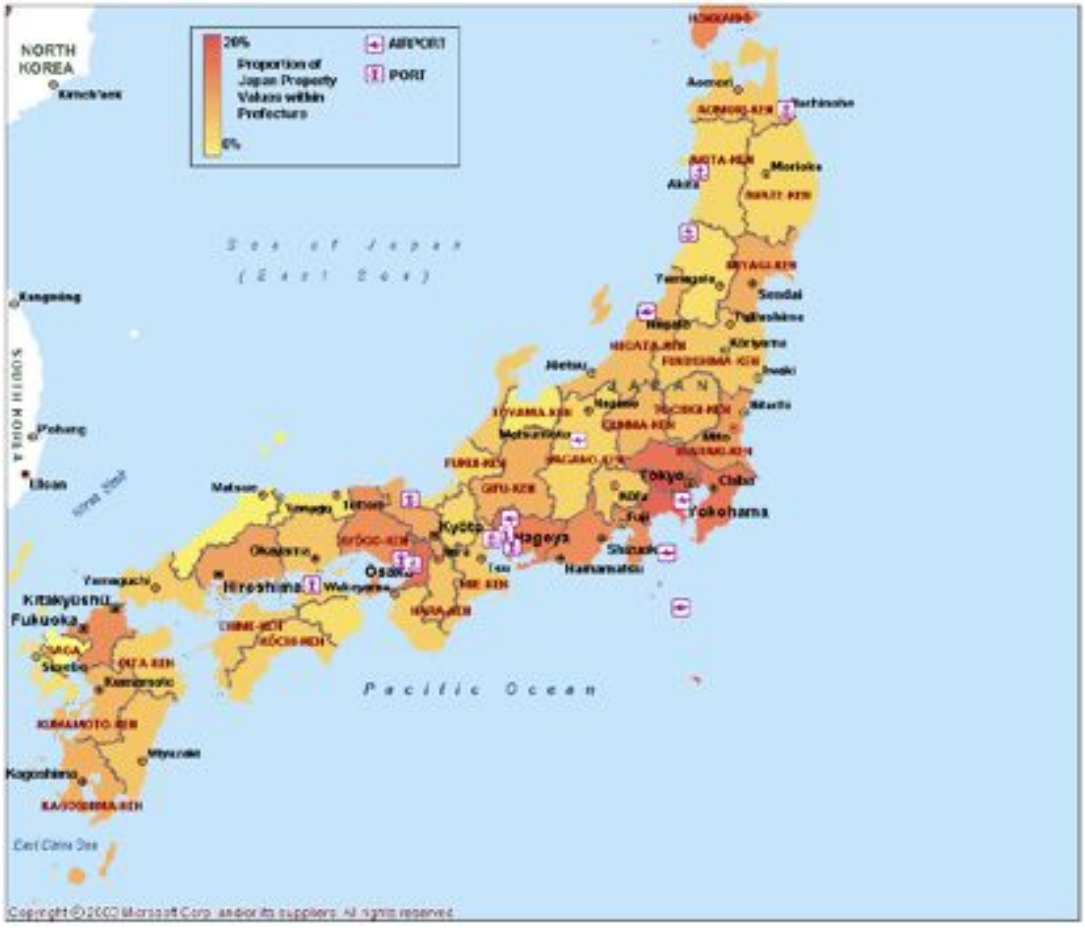
8 JAPANESE EARTHQUAKE

JAPANESE EARTHQUAKE EVENT

This event is based on the Great Kanto earthquake of 1923, with an estimated Insured Industry Property Loss from this event of USD51bn.

DISTRIBUTION OF PROPERTY VALUES IN JAPAN

The map below illustrates Lloyd's assumptions for the distribution of property values within Japan, which are also detailed in the Event Damage Factor Tables.



MAJOR PORTS

The table below lists the main ports in the Great Kanto footprint, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller ports that fall within the footprint of the event.

Port
Chiba Port
Nagoya Port
Yokohama Port
Kawasaki Port
Mizushima Port
Kitakyushu Port
Tokyo Port
Osaka Port
Tomakomai Port
Kobe Port

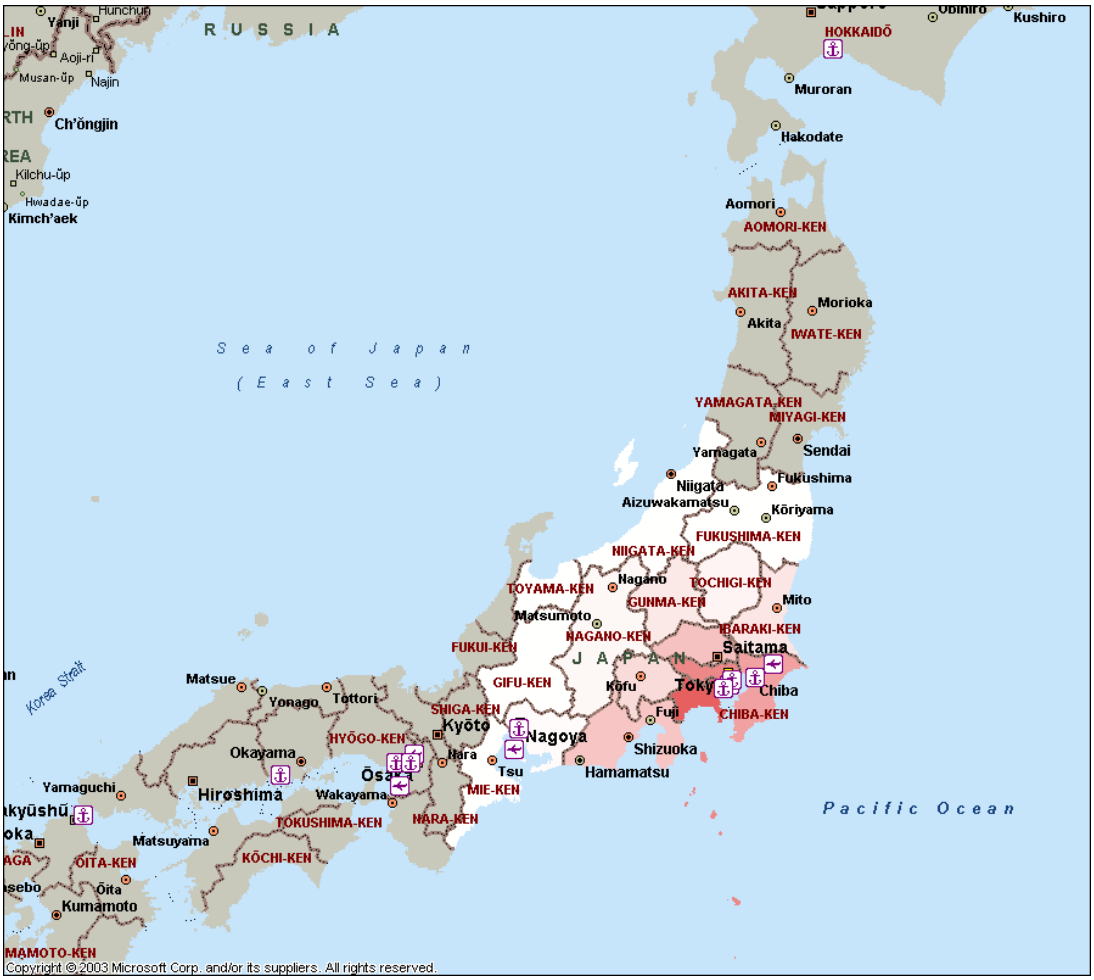
MAJOR AIRPORTS

The table below lists the main international and domestic airports potentially impacted by the Great Kanto earthquake event, which managing agents should consider in assessing syndicate potential exposures. They should also have regard to exposures in smaller airports that fall within the footprint of the event.

Airport
Narita International Airport
Central Japan International Airport
Kansai International Airport
Tokyo International Airport
Osaka International Airport

GREAT KANTO EVENT FOOTPRINT

The map below illustrates the footprint and damage levels for Japan, which are also detailed in the Event Damage Factor Tables.



INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential Property	USD15.50bn
Commercial Property	USD35.50bn
Marine	USD1.50bn
Personal Accident	USD0.50bn

Managing agents should consider all other lines of business that would be affected by the event. Particular consideration should be given to losses arising from:

PERSONAL ACCIDENT

It should be assumed that 2,000 deaths and 20,000 injuries will arise as a result of this major earthquake. Assume that 50% of those injured will have PA cover.

LIABILITY BUSINESS

Liability exposures should also be considered.

AVIATION

Following research undertaken by Lloyd's, managing agents should assume that minimal Aviation Hull losses will arise from an earthquake of this magnitude.

BUSINESS INTERRUPTION

Overland transport systems are severely damaged and businesses impacted, leading to significant business interruption exposure for a period of 60 days. This is restricted to the inner zone of maximum earthquake intensities (highlighted on Event footprint).

9 UK FLOOD

UK FLOOD – RDS EVENT

This scenario is based on a heavy rainfall event moving from west to east across south-east England resulting in extensive flooding of the River Thames from Oxford to Teddington with secondary flooding on the River Colne from Ruislip south and surface flooding on the western and southern edges of Heathrow. The total flood extent covers 194 km^2 and would cause significant impact on the towns of Oxford, Reading, Slough, and Henley areas of western London as shown in the figure below.

This event results in an estimated Industry Insured Loss of £6.2bn. The map below illustrates the flood footprint.

INDUSTRY LOSS LEVELS

Managing agents should assume the following components of the loss.

Residential	£4.50bn
Commercial/Industrial	£1.60bn
Agriculture	£0.05bn
Motor	£0.05bn

Managing agents should also consider all other lines of business that may be affected by the event. Particular consideration should be given to the potential for losses arising from:

Cargo **Specie/Fine Art** **Cancellation (Event \ Travel)**

TREATMENT OF POLLUTION

Managing agents are advised that pollution may ensue the flood event. Although no specific details are provided here, managing agents should consider the impact and operation of Seepage and Pollution exclusions, and consider the impact of pollution as an aggravating factor in residential losses. Managing agents may wish to refer to historical analogues, including the Carlisle floods of 2005. The impact of pollutants should also be considered for indirect losses at London Heathrow airport. Liability associated with potential pollution episodes will be difficult to calculate and as such should not be included in managing agents' assumptions.

EVENT DURATION

Managing agents should assume that the flood event will not exceed 168 hours.

MAJOR ROADS

The table below lists the major roads within the flood footprint which managing agents should consider in assessing business interruption.

Major Roads
M25
M3
M4
A40
A34
A404
A437
A4180

MAJOR RAIL

Rail disruption will occur between London (Waterloo) and western services towards Oxford, Bristol, and Cardiff. There will be little disruption to the London Underground system except for flooding of Pinner station on the Metropolitan line.

HEATHROW AIRPORT

Surface flooding will cause disruption to Heathrow Airport with flooding from the west encroaching into Terminal 5 and the end of both runways. Further flooding from the south will affect cargo transit and handling facilities.

CONTINGENT BUSINESS INTERRUPTION LOSSES

Wherever possible, managing agents should consider the potential for additional losses from Named Customer/Supplier extensions in respect of policies identified as sustaining direct losses.

For the purpose of the RDS, the potential for CBI losses from policies not directly affected by the flood event can be discounted.

10 TERRORISM

In recent years there has been an increasing volume of terrorism business written within the market. Our view of the profile of terrorism risk has remained relatively unchanged, with two Manhattan scenarios. In light of this, the RDS Steering Group have agreed that an opportunity exists to better understand the profile of terrorism risk across the market - for the purposes of this request, terrorism refers to any business coded as risk code TO and TU. These requirements have been defined in consultation with the LMA Terrorism Panel and are outlined in greater detail within the RDS 2010 Guidance & Instructions document.

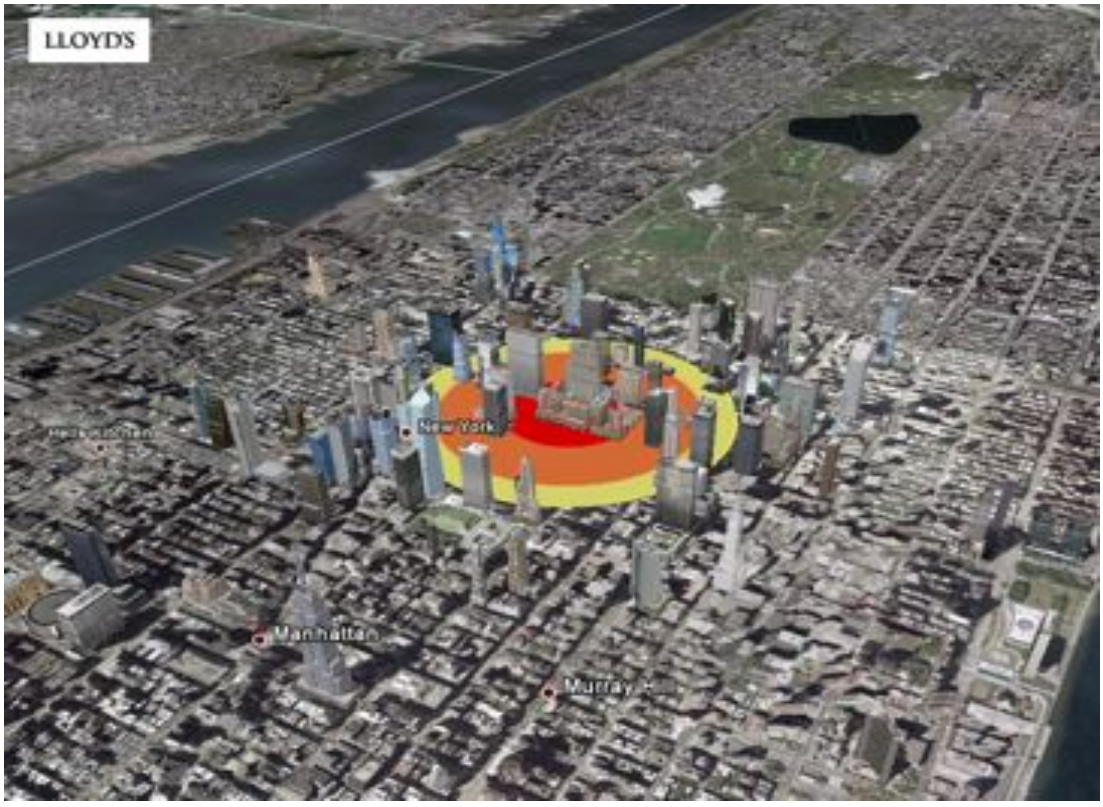
Similar to previous years, Managing agents should also complete the following hypothetical terrorist attack scenarios:

ROCKEFELLER CENTER EVENT

The Midtown Manhattan area, New York, at 11:00am on 1 January 2010 suffers a 2-tonne bomb blast attack causing:

Zone	Impact Description	Damage Zones	Property Damage	Fire Loss
1	Collapse and fire following	Inner zone, radius 200m	100%	10%
2	Massive debris damage to surrounding properties	400m radius	25%	2.5%
3	Light debris damage to surrounding properties	500m radius	10%	1%

Radii measurements are taken from the Rockefeller Center as a reference point.



EXCHANGE PLACE EVENT

The lower Manhattan area, New York, at 11:00am on 1 January 2010 suffers a 2-tonne bomb blast attack causing:

Zone	Impact Description	Damage Zones	Property Damage	Fire Loss
1	Collapse and fire following	Inner zone, radius 200m	100%	10%
2	Massive debris damage to surrounding properties	400m radius	25%	2.50%
3	Light debris damage to surrounding properties	500m radius	10%	1%

Radii measurements are taken from 20 Exchange Place as a reference point.

PRESCRIBED ASSUMPTIONS FOR BOTH EVENTS

NUMBER OF DEATHS AND INJURIES

1,000 blue/white-collar worker deaths in total and 2,500 injuries in total. Managing agents to determine a worst case split across lines of business (WCA, PA, Group PA, etc.) and document assumptions using the commentary facility in CMR form 990. The following percentage split should be used for non-fatal injuries:

- 14% life threatening
- 35% moderate
- 51% minor

BUSINESS INTERRUPTION

Overland/underground transport systems are partially damaged, leading to significant business interruption exposure for a period of three months.

AFFECTED CLASSES OF BUSINESS

All possible affected business classes should be included in the calculations, such as Contingent Business Interruption and Specie/Fine Art.

GRANULARITY OF TREATY EXPOSURES

Syndicates with low resolution treaty exposure data should use a damage factor based upon claims experience from the World Trade Center attacks of 2001.

FIRE FOLLOWING

Taking ‘Fire Following’ into consideration, managing agents should assume the same damage zones with the appropriate Fire Loss percentage applied. Managing agents should assume that all property policies are impacted, given the New York state ruling that property policies cannot exclude fire. Any assumptions concerning Fire-Following Terrorism are to be documented using CMR form 990.

‘CBRN’ STATUS

It should be assumed that there are no Chemical, Biological, Radiological or Nuclear hazard exposures arising from these events.

SCENARIOS SUBJECT TO DE-MINIMIS REPORTING

11 MARINE

SCENARIOS (REPORT BOTH EVENTS)

Managing agents should return a marine loss scenario for both of the following two incidents. In both scenarios, excess layers of liability, hull and cargo should be included, based on maximum Aggregate exposures.

MARINE COLLISION IN PRINCE WILLIAM SOUND

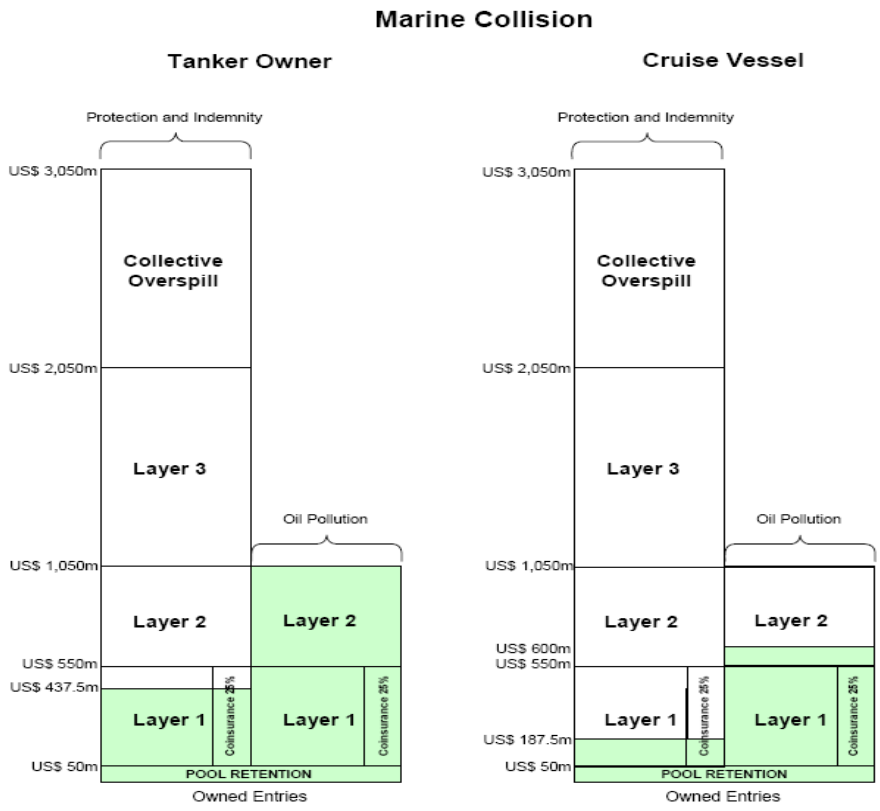
A fully laden tanker calling at Prince William Sound is involved in a collision with a cruise vessel carrying 500 passengers and 200 staff and crew. The incident involves the tanker spilling its cargo and loss of lives aboard both vessels.

Assume 70% tanker owner/30% cruise vessel apportionment of negligence and that the collision occurs in US waters.

Assume that the cost to the tanker and cruise vessel owners of the oil pollution is USD2bn. This would lead to oil pollution recoveries on the International Group of P&I Associations' General Excess of Loss Reinsurance Programme (IG Reinsurance Programme) of USD1bn from the tanker owner and USD0.55bn from the cruise owner.

Assume 125 fatalities, 125 persons with serious injuries and 250 persons with minor injuries: with average compensation of USD1.5m for each fatality, USD2.5m for each person with serious injuries and USD0.5m for each person with minor injuries.

The following diagram illustrates the structure of losses to the tanker and cruise vessel owners on the IG Reinsurance Programme as per 2009.

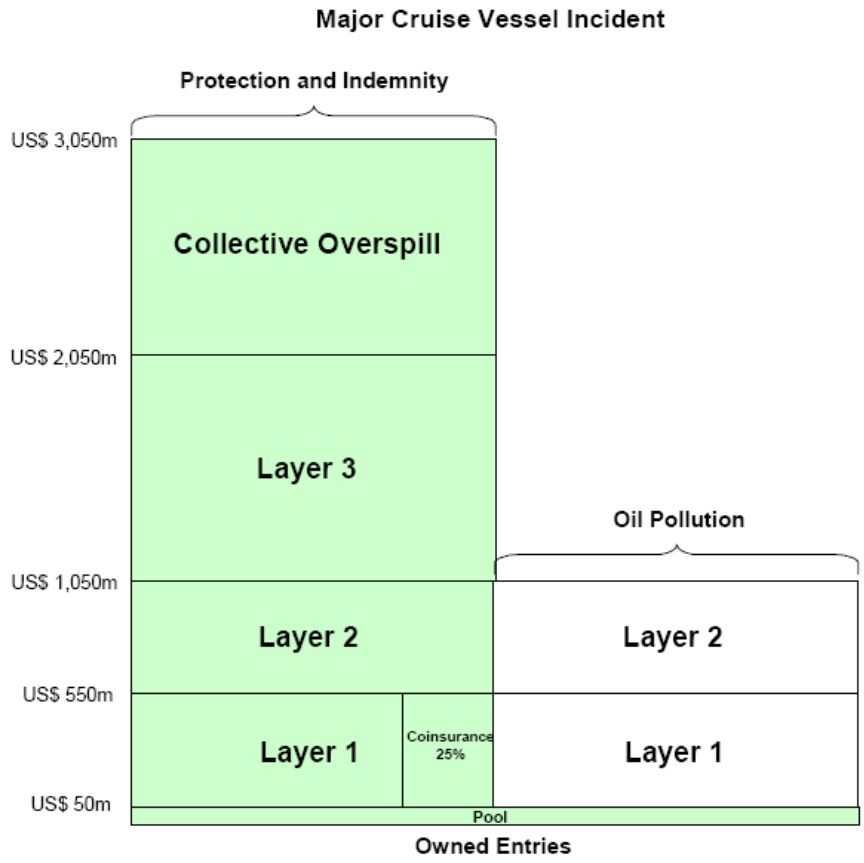


MAJOR CRUISE VESSEL INCIDENT

A US-owned cruise vessel is sunk or severely damaged with attendant loss of life, bodily injury, trauma and loss of possessions. Claims to be heard in a Florida court.

Assume 500 passenger fatalities and 1,500 injured persons with average compensation of USD2m for each fatality and USD1m for each injured person. In addition, assume an additional Protection and Indemnity loss of USD500m to cover costs such as removal of wreck, and loss of life and injury to the crew.

The following diagram illustrates the structure of losses on the IG Reinsurance Programme.



12 LOSS OF MAJOR COMPLEX

Assume a total loss to all platforms and bridge links of a major complex.

Include property damage, removal of wreckage, liabilities, loss of production income and capping of well.

Managing agents should use the commentary facility in form 990 (supplementary scenario information) to name the complex and to provide details of modelling assumptions.

13 AVIATION COLLISION

Assume a collision between two aircraft over a major city, anywhere in the world, using the syndicate's two highest airline exposures. Assume a total liability loss of up to USD4bn: comprising up to USD2bn per airline and any balance up to USD1bn from a major product manufacturer's product liability policy(ies) and/or an air traffic control liability policy(ies), where applicable.

Consideration should be given to other exposures on the ground.

Assumptions should be stated clearly using the event commentary facility in form 990.

Managing agents should include the following information in their return;

- the city over which the collision occurs;
- the airlines involved in the collision;
- the airline policy limits and syndicate's line and exposure per policy;
- maximum hull value per aircraft involved;
- maximum liability per aircraft involved;
- name of each product manufacturer and the applicable policy limits; and
- name of the air traffic control authority and the applicable policy limit

14 SATELLITE RISKS

SCENARIOS (REPORT BOTH EVENTS)

Managing agents should return satellite loss information relating to both of the following events if either one of these events produces a loss in excess of the *'de-minimis'* reporting level.

PROTON FLARE

A proton flare is a vast outpouring of protons, which can result in permanent damage to semiconductor devices, particularly solar array cells. A large proton flare could result in a significant number of satellites losing some of their power-generating capability.

Satellite orientation, age and make will also determine how a proton flare will affect a satellite. However, a single large proton flare (or a number of smaller flares in close succession) has the potential to affect all synchronous satellites and could result in a loss of power by all satellites.

For the purposes of this RDS, it should be assumed that either a single anomalous large proton flare or a number of flares in quick succession results in a loss to all satellites in synchronous orbit. All live exposures in this orbit will be affected by the proton flare. Managing agents should assume a 5% insurance loss to all affected policies.

The loss under this RDS will therefore be:

(Insured Satellites Value) x (Loss to Policy)

Therefore, if a syndicate's share of an insured satellite is USD10m, the loss to the syndicate would be calculated as:

USD10,000,000 x 5% = USD500,000

Managing agents should note that under this RDS, "Total Loss Only" policies, component-specific policies and policies not covering power losses will not be triggered.

GENERIC DEFECT

An undetected generic defect in a number of operational satellites has the potential to cause significant losses to the space insurance market.

During the time it takes for a generic defect to emerge, many more satellites of the same model/variant may have been launched. For the 2010 RDS return, managing agents should report against those satellites that are in the following model/variant groups:

- **A2100** all variants, including A2100, A2100A, A2100AX, A2100AX2
- **Boeing-376** all variants, including BS-376HP, BS-376W
- **Boeing-601** all variants, including BS-601, BS-601HP
- **Boeing-702** all variants, including BS-702-M, BS-GEM
- **Eurostar-2000** all variants, including E2000, E2000+
- **Eurostar-3000** all variants, including E3000
- **Express** all variants, including Express-A, Express-AM
- **Insat** all variants, including Insat-2, Insat-3, Insat-4
- **LS-1300** all variants, including LS-1300, LS-1300 extended, LS-1300-GOES
- **Spacebus-3000** all variants, including Spacebus-3000B2, Spacebus-3000B3
- **Spacebus-4000** all variants, including Spacebus-4000, Spacebus-4100
- **Starbus** all variants, including Star-1, Star-2

For the purpose of this RDS, managing agents should assume the following damage levels when calculating their gross and net exposures for each model/variant group for launches that have occurred in the last five years:

Period Remaining on Policy	Percentage of Satellites that Suffer a Total Loss
Greater than 24 Months	100%
18 Months - 24 Months	80%
12 Months - 18 Months	60%
6 Months - 12 Months	40%
Less than 6 Months	20%

The results should be calculated by taking the sum of the model/variant group exposures within each time period and multiplying them by the respective percentage (e.g. 20% of the total exposure for the Eurostar-2000 model/variant group that have less than 6 months left on their policy).

Managing agents should report full details of their largest potential Net Loss due to a generic defect in a single model/variant, as listed above. Managing agents should also prepare details of the Aggregate Exposure, Gross Loss, Net Loss and the number of satellites for all three model/variant groups that have the highest exposure in order that Lloyd's can review these within the syndicate, as required.

Managing agents should assume that all satellites affected are considered to suffer a constructive total loss.

15 LIABILITY RISKS

SCENARIOS

Managing Agents should report two internally modelled liability loss scenarios for each syndicate, subject to the usual *de minimis* criteria. Where exposed to both professional and non-professional lines liability scenarios, one of each type should be reported.

PROFESSIONAL LINES

The following example scenarios are provided to help guide managing agents in considering the type, scale and impact of their internally modelled scenarios.

Mis-selling of a financial product

Any systemic loss arising from the mis-selling of a financial product including the distribution of said financial product through the appropriate channels. This could comprise two distinct sources of liability attributable to: 1) product and 2) distribution channel. Regulatory investigation might be a trigger to this type of systemic loss but would not of itself be the systemic loss.

Failure/Collapse of a Major Corporation

The failure or collapse of a major corporation listed on one or more Global Stock Exchanges.

Failure of a Merger

The failure or collapse of a merger involving one or major corporations listed on any Global Stock Exchange.

Failure of a Construction Project

The failure of a construction project involving all of the syndicate's casualty risk codes (for example, non-marine liability, architects, surveyors and engineers, etc.).

The 2012 Olympics represents a major exposure in terms of potential failure of a large construction project. Major problems affected the Greek Olympics and it is not unreasonable to assume that a similar scenario could arise for the London construction project.

Recession-related Losses

A managing agent may identify that its syndicate is exposed to a dramatic fall in the housing market, associated with high negative equity, mortgage shortfalls and defaults. It could model syndicate exposures by utilising casualty risk codes, including: Independent Financial Advisors (IFAs), Solicitors, Surveyors, Lenders, Accountants.

Modelled exposures should also consider a rising unemployment rate thus potentially increasing the exposures to Employment Practices Liability underwritten as a stand-alone product or as part of Directors & Officers Liability policies.

NON-PROFESSIONAL LINES SCENARIOS

The following example scenarios are provided to help guide managing agents in considering the type, scale and impact of their internally modelled scenarios:

Industrial/Transport Incident

A managing agent may identify that it has a high potential syndicate exposure to an extreme loss arising from a release of chlorine at an industrial site or from a train travelling through a major city.

The managing agent would develop a physical model of the incident, with assumptions for the area and populations affected, and the effects of the chlorine gas itself. The model should identify the various organisations that would be held liable, including joint ventures and professional advisors that the syndicate covers.

Multiple Public/Products Losses

An agent managing a syndicate with multiple peak exposures may determine that it would be severely impacted by catastrophe losses affecting a multiple number of contracts. Such a scenario would capture the cumulative effect of a number of vertical spikes and the impact on the syndicate's reinsurance programme.

An example of a loss scenario involving multiple products losses arising out of a common cause would be defective hip replacements which could generate a high frequency of relatively large individual payments via a series of class actions.

TREATMENT OF BACK YEAR DETERIORATION

The above scenarios focus on losses arising from events occurring in 2010, and therefore do not attempt to quantify potential exposures from back year deterioration. The issue of reserving adequacy is subject to monitoring and review with colleagues within the Lloyd's Corporation.

16 POLITICAL RISKS

SCENARIOS (REPORT UP TO FIVE EVENTS)

Managing agents should return up to five Political Risks loss scenarios for each syndicate based on the following events:

- Losses triggered by an economic downturn in South East Asia;
- Losses triggered by an economic crisis in South America;
- Losses triggered by a political crisis in the Middle East.
- Losses triggered by an economic downturn in Turkey.
- Losses triggered by an economic downturn in the Russian Federation.

Managing agents should return those scenarios that generate losses above the '*de-minimis*' reporting level.

The 2010 Political risks scenario assumptions have been refreshed in association with the LMA Political Risks Panel. Supplementary country aggregate must be reported for 20 countries as agreed with the LMA Political Risks Panel.

Detailed guidance notes and the reporting template are available from CMR or the Lloyd's Exposure Management team.

17 ALTERNATIVE RDS A & B

Managing agents should report two further realistic events not listed above that represent a potential material impact to the syndicate.

Examples include:

- Earthquakes outside of California, New Madrid, and Japan;
- A major flood incident e.g. the Seine, 1953 type North Sea coastal flood;
- Caribbean /US hurricane clash;
- Pandemic risk;
- Terrorism accumulations (ex-Manhattan);
- A 'Selby-type' liability loss; or
- An accumulation of sports team members

Two alternative scenarios must be reported via the RDS return. Alternative scenarios are not subject to Franchise Guidelines.